/222 cont./

• 147 262 Perhaps the Indian owes to the richness of Vitamin A, taken in thre[illegible] the consumption of such a variety of insects and larvae, the admirable night vision that he enjoys.

/223/ g) Fruits.

*192 245 If the native diet is lacking in green vegetables and legumes, many are the fruits that they eat.

252 262 1) Among the fruit trees cultivated, there come first five or six varieties of banana, ohó; and they eat them raw, baked, or boiled and reduced to mingau. Even when they are still green, they eat them roasted in the ashes.

They are also fond of pineapple, sẽ'rá (Uaupés sẽ'ná), biriba, pixká, cashew nuts, sõ'rá (U. sõ'ná), and, more recently, the orange, darãñõ, avocado, ñõmõ, abio /Lucuma caimito/, kã'rẽ.

*192 222 252 262 [273] 2) The wild fruits that they know and eat are very numerous. We shall recall some: Õ'sé, cucura or mapatí (pouróuma cecropiaefóliae, Mart.), one of the Moraceae very similar to the imbauba, producing large bunches of fruits the size of a jabuticaba /Mouriria pusa/, which, when ripe, are dark, sweet, and mucilaginous, and, fermented, give a wine-like drink; mẽ'rẽ (U. mẽ'nẽ), wirí-mẽ'rẽ, various species of ingá (ingá cinamómea, marginata, édulis, etc., Mimosaceae); burukũña, maracujá /species of Passiflora/; õxtã-ĩĩmĩ, cumã (fruit of the service tree); pãgá, another species of cucura; kenõ, jatobá /locust tree/; simiõ, uacú /Monopterix uaucú/; teheõ and ehyũ-pu, varieties of piquia; thoá, yúa-pixuna; wamã, umarí; wĩhĩ, paricá /Leguminosae/; extoá, cubio /Solanum sessiliflorum/; wextí, umirí; wikasoró, small white fruit; tohoá-kaxperí, omã-karperí, and ñierẽ, similar to the cumã.

3) And many species of palm nuts, more or less oily: ixkí, inajá; puxpyá, ucuquí; mĩx'pĩ, assaí; ã'rẽ, pupunha, for which they are eager; bextá, tucumã, which they like very much, ñãmã (U. ñumũ), bacaba and patauá; etc.

/299/

c) Music.

1) Musical sense.

533 Probably the most pronounced artistic sense of these tribes is the taste for music. This musical sense is so remarkable that a
534 child cuts his taquaras /bamboo/ with the right dimensions, ties
857 together eight or ten, and a small organ results, the "flauta-de-
533 pã," or carĩço, with the notes succeeding one another with the
[192] same interval of frequency of vibration as in the musical scale, as can be verified with a harmonium. As a rule they manufacture it in pairs, in such a way that one will serve as contracanto /countersong/ to the other.

533 They are, then, endowed with a good musical ear; for this reason they learn with great facility the most varied of our songs, even classical pieces, for one or more voices, and they greatly
[177] enjoy instrumental or vocal music. They moreover greatly appreciate the "music of the whites," that is, of the civilized.

[194] As an effect of the Tukano language, full of nasals and very
[147] many and rough gutturals and aspirates, and of the influence of the diet (pepper), climate, and way of life, the Indian's voice has little elasticity (54),

54. The voice has so little elasticity that perhaps no native of the Uaupés is able to give a whole octave. Outside of the feasts and
[562] dances the men never sing; the women do it infrequently, for example, when they work in the clearing. It is to be pointed out, however, that the men's songs are religious hymns, whereas those of the women are bacchic compositions that they render when they distribute the drink.
[797] Among the alumni, and especially among the alumnae, of the Salesian Mission, there is a greater elasticity, and one hears humming more frequently. This, however, is usually the religious or secular songs learned at school.

/299 cont./

533 [147] [194] is metallic and unpleasant when he speaks, and it is even more metallic in conjunction, when they speak or sing.

2) Songs.

The native likes to sing, although he appears bashful about doing it, outside the feasts, in front of the civilized. He has a repertoire of songs for the ritual dances (religious songs), and others for his amusement (secular songs). The former are always in choir, without solos and in only one voice. The latter are sung by one or more singers simultaneously or alternately, repeating the same theme or not.

a) Religious songs.

They are sung exclusively by the men. They are slow, monotonous, with many repetitions. As for the rhythm, inspiration, and /300/ movement, they can be classified or grouped among the Gregorian compositions. Since the only process of [178] apprenticeship is by hearing and the memory, it follows that the music is preserved more or less faithfully (55);

> 55. As is verified by watching their feasts in different circumstances and places or among different tribes.

[178] the lyrics, however, have been corrupted. Nowadays in many of these songs there are only sounds without meaning, and the forest dwellers themselves confess that they do not understand the meaning of the articulations that they utter (56).

> 56. As happens, incidentally, in the popular songs of the civilized. (Cf. also VII-6, a (2) /see a (3)/.)

/404 cont./

481 524 [192] One of the aquatic amusements of the children is the one called Wãx-tĩ Max-kõ, the son of Wãx-tĩ, an obvious reference to the legend of Nhamacurú (cf. "Lendas do Uaupés /Legends of the Uaupés/"). To wit: two children placed one in front of the other, with the arms toward the back, immerse themselves in the water simultaneously. Moments later, emerging at the same time, they embrace each other quickly. Then, again with the arms to the back, they immerse themselves, in order to emerge again, embrace each other, and sink into the water. This is done a certain number of times, until they become tired, and the entertainment ceases.

501 868 [226] [147] Another frequent exercise is that of rowing. From childhood on, from about three or four years of age perhaps, they learn how to row and have their small oars. Not infrequently a child alone or two go rowing and travel kilometers from their own home. Many times it is the children who row, while the men attend to fishing from the canoe. This habit gives them surprising skill and endurance. They are capable of rowing ten or more hours a day and for six or eight consecutive days on long trips.

501 The striking of the oar handle on the side of the canoe marks the rhythm, and, when there are several rowers, they take pride in the accuracy /405/ of the strokes, as if they were one single stroke. Three different rhythms are to be observed: 1st -- one faster, when they have need to reach some point, and in the currents; there are more or less three deep strokes in two seconds; 2nd -- when there is no current, they change to a slower rhythm: one measure yes and two no, so that one hears two sounds in the water (of two waves which form and strike against the canoe), having three strokes in five seconds; 3rd -- at times they take up another rhythm: two fast strokes and a slow and deeper one.

The following detail can be observed: the hand that holds the handle of the oar describes a perfect circle; and after they give a blow on the edge of the canoe, the oar remains for a moment lying over it, parallel to the water. In order to rest from the effort, they go to rowing from the other side of the canoe;

5: Goldman E-5 (1939-1940) 1963
SQ19 Tucano SQ19
CUBEO



142 oped: heads of the brachycephalic type: though I have noticed cases of extreme dolichocephalic variations. Teeth are generally poor. –

147 Dr. Rice also commented on the capacity of the Cubeo Indians for great exertion on a minimum of food and rest. I can corroborate this judgment. I accompanied Indians on canoe trips when we paddled for as long as 17 consecutive hours with little rest or nourishment other than a handful of manioc meal in water. There was usually no urgent necessity for such exertion or privation. The Indians customarily eat lightly when traveling, and if there is any chance of reaching home rather than camping out or imposing upon the hospitality of another sib they prefer to keep going. However, it was not unusual for strong young men to topple from their canoes in a dead faint upon reaching home. Revived by the river they scrambled ashore, secured the canoe, and entered the house with the appropriate vigorous air, effectively concealing their acute fatigue. It is in fact characteristic of the Cubeo to make light of their accomplishments and not to yield readily to physical weakness.

[484] [261] [157]

114 Ethnographically, the Northwest Amazon was first fully brought to light by Dr. Theodor Koch-Grünberg, ethnographer and museum collector. Koch-Grünberg's systematic survey of the region at the turn of the century covered all main tribes and their settlements along the principal rivers. He spent many weeks on the Cuduiarí among the *Hehénewa* sibs of the Cubeo, and ascended the Cuduiarí to the limits of its habitation (1909). His published reports are invaluable even though he never stayed long enough in one place to get a deep grasp of the culture. He was, however, an excellent observer and reported fully on language, custom, and material culture. I did not read Koch-Grünberg before going to the field so that my observations are totally independent. It is a source of satisfaction, therefore, that our observations agree closely on most details. Koch-Grünberg's information was deficient on social structure and ceremonial patterns. It is in these two respects that my study represents a carrying forward of the work he so ably began. I have drawn freely upon his published works to fill in gaps in my own information on the Cubeo and of course for the rich data on surrounding Tucanoan, Arawakan, and Cariban tribes. His was the pioneering survey of the entire region, whereas mine is a relatively limited study of a single community. Koch-Grünberg died among the Indians of the Northwest Amazon in 1924, his ethnographic work prematurely cut off.

114 127 114

The first scientific observer to report on the Indians of the Vaupés was Alfred Russell Wallace (1870), who was there in 1853. While his interests were mainly those of the naturalist, he found Indian life to

5: Goldman E-5 (1939-1940) 1963
SQ19 Tucano SQ19
CUBEO



## THE ECONOMIC SYSTEM

The Cubeo economy may be characterized as essentially inelastic, sustenance-oriented, and egalitarian. In these respects it contrasts with parallel root horticulture economies in other parts of the world, such as in Oceania and Africa. In those areas economies are generally in the service of social status and of political power and are, consequently, dynamic, fostering social and economic inequality. Among the Cubeo, on the other hand, and in the South American tropical forest as a whole, social status is a minor issue in production, while the headman, who in Oceania and in Africa plays a commanding role in economic distribution, has here only the most diffuse economic functions.

The relative inelasticity of an economy is, needless to say, a function of many factors. In the case of tropical forest horticulture, the nature of crops, soils, methods of cultivation, and tools are all relevant. Even more significant, however, are such factors as the social organization of production, including such fundamental matters as the division of labor, as well as the nature of political controls. The motives of production are of greatest importance. Motives of status and of political power provide, all other factors being equal, for an expanding economy. When the aim of production is mainly to provide sustenance and to maintain a limited network of lateral (as opposed to hierarchical) exchanges the economy tends to remain in equilibrium with its customary standards of community size. Such an economy is conservative and traditionalistic.

With respect to physical factors, Cubeo manioc horticulture has come close to reaching a productive limit in terms of yield per acre. The yield from *Manihot utilissima* normally ranges from six to ten tons per acre. Among the *Bahúkiwa* I estimated the acreage yield to be between five and six tons, a productivity that reflects considerable agronomical skill and effort. Any substantial increase in aggregate production would have to come more from expanded acreage, for which the land is available, than from more intensive cultivation of present plots. Acreage expansion, however, is limited by a combination of social and cultural conditions as well as by the peculiar nature of bitter manioc itself. As is well known, the ease of cultivation of bitter manioc and its relatively high yield is offset by the great effort required to rid the tubers of hydrocyanic acid. I have already described the processing of manioc from raw tuber to a cake and its heavy demands on the time of the women. Bitter manioc is a cumbersome crop and the load of 50–60 pounds that a woman carries home from the garden represents her carrying capacity.

6: Moser and Tayler E,N-5 (1960-1961) 1967 SQ19 Tucano SQ19

# 4

# *The Forest Addicts*

The Tukano are small: a man rarely exceeds five foot six and the women are often no more than four foot ten inches. To see a cripple or deformed person is unusual. They are healthy and immensely strong. A man wears no more than his loincloth, today cut from a piece of trade cotton but formerly a strip of beaten barkcloth. Around his neck are three or four coils of minute white porcelain beads, which are among the most valued objects of exchange; a tight string of black berries is strung on *cumare* palm fibre above each elbow. The ears are often pierced with a short cane jutting out from the lobe; sometimes a feather is put into the cane, or a flower replaces the earplug. With their short, cropped hair and well-proportioned bodies they stand out as strong figures, beautifully adapted to the forests in which they live.

Their gait is jerky rather than slow and relaxed, indeed they almost run; whether the Indian is out hunting or carrying heavy loads he always moves in the same way. We could only look on amazed as our fifteen-gallon fuel drums were carried for two- or three-hour stretches with no apparent difficulty. They only showed any signs of wilting in strong sunlight; an Indian would rather travel by night than on an open river in the midday sun; his home is in the cool forest or under the dark eaves of the *maloca*. His face painted red with *karayuru*, a bow and a quiver of curare-tipped arrows in his hand, he has little sympathy for strangers and would rather remain undisturbed. It is therefore not surprising that the Indian's face tells you little. When he stares at you with his black eyes, it is as though you were peering into the cold unknown, and there is little warmth in his expression. We very seldom noticed any demonstration of affection among the older people. Husband and wife live together rather as a matter of arrangement than through love, and tenderness was only shown to the younger children. The old people, once unfit to go out hunting or to work in the plantation, may be neglected in times of shortage and even left to die. They are no longer of any use to the society, so it is best they go; for theirs is a harsh world where only the fittest can survive.

Although the Tukano seem outwardly reserved, lacking in affection and often proud, they are invariably very courteous. Their greetings are formal – just as we shake hands they always exchange a lengthy stream of words. It is